

SECTION V-A - AM BROADCAST ENGINEERING DATA**FOR COMMISSION USE ONLY**File No. _____
SSB Referral Date _____
Referred By _____

Name of Applicant _____

1. Purpose of Application: (check all appropriate boxes)

- ☐ Construct new station
- ☐ Make changes in authorized/existing station
- ☐ Principal authorized/licensed community
- ☐ Frequency
- ☐ Power
- ☐ Main studio location per 47 C.F.R. Section 73.1125(b)(2)
- ☐ Antenna system (including increase in height by addition of FM, TV or other antenna)
- ☐ New antenna construction
- ☐ Alteration of existing structure(s)
- ☐ Increase height
- ☐ Non-DA to DA
- ☐ Decrease height
- ☐ DA to Non-DA
- ☐ Other (Summarize briefly the nature of the changes proposed)
- Call Sign (if issued) _____
- Hours of operation _____
- Transmitter location _____
- Filed in compliance with an Allotment Plan to migrate to the expanded band _____
- Allotment Number _____

2. Principal community to be served:

State	County	City or Town
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3. Facilities requested:

Frequency: _____ kHz

Power: Night: _____ kW Day: _____ kW

Class of Station (A, B, C or D) _____

Hours of Operation: _____

Critical Hours: _____ kW

☐ Stereo ☐ Monaural

4. Transmitter location:

State	County	City or Town
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Exact antenna location (*street address*). If outside city limits, give name of nearest town and distance (in kilometers), and direction of antenna from town.

Geographical coordinates (*to nearest second*). For directional antenna give coordinates of center of array. For single vertical radiator give tower location. Specify South Latitude and East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed. (*The Commission requires coordinates based on NAD 27.*)

Latitude	°	'	"	Longitude	°	'	"
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5. Has/have the antenna structure(s) been registered with the Commission? ☐ Yes ☐ No

If Yes, provide the seven digit registration number(s) and proceed to item 9. _____

6. Has the owner of the antenna structure(s) filed an application for registration with the Commission? ☐ Yes ☐ No

If yes, provide the date FCC Form 854 was filed and proceed to item 9. _____

7. Antenna structure will be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town or settlement where it is evident beyond all reasonable doubt that the structure is so shielded that it will not adversely affect safety in air navigation. ☐ Yes ☐ No

If yes, submit as an Exhibit a detailed explanation and/or diagram to support your claim and skip to item 9.

Exhibit No.

8. Antenna structure does not meet FAA Notification criteria as defined under 47 C.F.R. Section 17.7 and therefore does not require registration. ☐ Yes ☐ No

9. Is the proposed site the same transmitter-antenna site of other stations authorized by the Commission, or specified in another application pending before the Commission? ☐ Yes ☐ No

If Yes, indicate call sign or application file number: _____

10. Antenna system (*including ground or counterpoise system*)

Non-Directional ☐ Day ☐ Night ☐ Critical Hours

Estimated efficiency _____ mV/m per kW at one kilometer

Directional ☐ Day only (DA-D) ☐ Night only (DA-N)
☐ Same constants and power day and night (DA-1)
☐ Different constants and/or power day and night (DA-2)
☐ Different constants and/or power day, critical hours and night (DA-3)

Submit complete engineering data in accordance with 47 C.F.R. Section 73.150 for each Directional antenna pattern proposed.

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Non-Directional/Directional

If antenna(s) is/are either top loaded or sectionalized, describe fully in an Exhibit. *(Include apparent electrical height.)*

Exhibit No.

Type of feed circuits (*excitation*)

☐

Series Feed

☐

Shunt Feed

☐

Folded Unipole

☐

Other (*explain*)

TOWERS (in meters, rounded to nearest tenth of a meter)	1	2	3	4	5	6
Overall height of radiator above base insulator, or above base, if grounded						
Overall height above ground (without obstruction lighting)						
Overall height above ground (<i>include</i> <i>obstruction lighting</i>)						
Overall height above mean sea level (<i>include</i> <i>obstruction lighting</i>)						

For additional towers, provide information exactly as it appears above in the Exhibit.

11. Has the FAA been notified of the proposed construction?

☐

Yes

☐

No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.

Date _____ Office where filed _____

12. List all landing areas within 8 kilometers of antenna site. Give distances and direction to the nearest boundary of each landing area from the antenna site.

	Landing Area	Distance (km)	Direction
(a)	_____	_____	_____
(b)	_____	_____	_____
(c)	_____	_____	_____

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13. Attach as an Exhibit a description and vertical plan sketch (*including supporting buildings, if any*) of the proposed structure, giving heights above ground, in meters, for all significant features. Clearly indicate existing portions, noting lighting, and distinguishing between the skeletal or other main supporting structure and the antenna elements. If a directional antenna, give spacing and orientation of towers.

Exhibit No.

If not fully described above, attach as an Exhibit further details and dimensions, including any other antennas mounted on tower and associated isolation circuits.

Exhibit No.

Attach as an Exhibit a plat of the transmitter site clearly showing boundary lines, roads, railroads, other obstructions, and the ground system or counterpoise. Show number and dimensions of ground radials or, if a counterpoise is used, show heights and dimensions.

Exhibit No.

14. Will the main studio be located within the station's principal community contour as defined by 47 C.F.R. Section 73.24(i)?

☐ Yes ☐ No

If No, attach as an Exhibit a justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.

15. Is there a remote control location or is one to be established in accordance with 47 C.F.R. Section 73.1400?

☐ Yes ☐ No

If Yes, submit the following:

State	County	City or Town
Street Address (<i>or other identification</i>)		

16. Attach as an Exhibit a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to permit identification of all structures in the vicinity. The photographs must be marked so as to show compass directions, exact boundary lines of the proposed site, and locations of the proposed 1000 mV/m contour for both day and night operation. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the data referred to can be clearly shown.

Exhibit No.

17. Is the population within the 1 V/m (1000 mV/m) contour less than 300 persons or less than 1.0 percent of the population within the 25 mV/m contour?

☐ Yes ☐ No

If No, attach as an Exhibit a justification pursuant to 47 C.F.R. Section 73.24(g).

Exhibit No.

18. Environmental Statement. (*See 47 C.F.R. Section 1.1301 et seq.*)

- (a) Would a Commission grant of this application come within 47 C.F.R. Section 1.1307, such that it may have a significant environmental impact?

☐ Yes ☐ No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by 47 C.F.R. Section 1.1311.

Exhibit No.

- (b) If No, explain briefly why not.

- (c) Pursuant to OST Bulletin No. 65, October 1985, entitled "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation," the applicant must explain in an Exhibit what steps will be taken to limit the RF radiation exposure to the public and to persons authorized access to the tower site. In addition, where there are multiple contributors to radiofrequency radiation, you must certify that the established RF radiation exposure procedures will be coordinated with all stations.

Distance from tower(s) to the nearest point of the fence enclosing the tower(s) in meters.

_____ Meters

20. Allocation Studies

A. Daytime (for assistance, see 47 C.F.R. Section 73.37)

- (1) For daytime operation, attach as an Exhibit map(s) having appropriate scales, showing the 1000, 5, 2 and 0.5 (0.1, if Class A station) daytime contours in mV/m for both existing and proposed operations. On the map(s) showing the 5 mV/m contours **CLEARLY INDICATE THE LEGAL BOUNDARIES OF THE PRINCIPAL COMMUNITY TO BE SERVED.**

Exhibit No.

- (2) Does the daytime 5 mV/m contour encompass the legal boundaries of the principal community to be served?

☐ Yes ☐ No

If No, attach as an Exhibit a justification for waiver of 47 C.F.R. Section 73.24(i).

Exhibit No.

- (3) For daytime operation, for stations on a frequency between 535 kHz and 1605 kHz, attach as an Exhibit an allocation study utilizing Figure M-3 (*Figure R-3, 47 C.F.R. Section 73.190*) or an accurate full scale reproduction thereof and using pertinent field strength measurement data where available, a full scale Exhibit of the entire pertinent area to show the following:

Exhibit No.

- (a) Normally protected and the interfering contours for the proposed operation along all azimuths.
- (b) Normally protected and interfering contours of existing stations and other proposed stations in pertinent areas with which prohibited overlap would result as well as those existing stations and other proposals which require study to clearly show absence of prohibited overlap. If prohibited overlap were to occur as a result of the proposal, appropriate justification for waiver of 47 C.F.R. Section 73.37 is to be included.
- (c) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers, and operating or proposed facilities.
- (d) Properly labeled longitude and latitude degree lines, shown across entire Exhibit.

- (4) For daytime operation, attach as an Exhibit a tabulation of the following:

Exhibit No.

- (a) Azimuths along which the groundwave contours were calculated for all stations or proposals shown on allocation study exhibits required by (3)(a).
- (b) Inverse distance field strength used along each azimuth.
- (c) Basis for ground conductivity utilized along each azimuth specified in (4)(a). If field strength measurements are used, submit copies of the analyzed measurements. If measurement data are taken from Commission records identify the source of the measurements in the Commission's files.

B. Critical Hours (*If applicable, see 47 C.F.R. Section 73.187*)

- (1) For critical hour operation, attach as an Exhibit map(s) having appropriate scales, showing the 1000, 5 and 0.5 critical hours contours in mV/m for both existing and proposed operations. On the map(s) showing the 5 mV/m contours **CLEARLY INDICATE THE LEGAL BOUNDARIES OF THE PRINCIPAL COMMUNITY TO BE SERVED.**

Exhibit No.

- (2) Does the critical hours 5 mV/m contour encompass the legal boundaries of the principal community to be served?

☐ Yes ☐ No

If No, attach as an Exhibit justification for waiver of 47 C.F.R. Section 73.24(i).

Exhibit No.

- (3) For critical hour operation, attach as an Exhibit an allocation study utilizing Figure M-3 (*Figure R-3, 47 C.F.R. Section 73.190*) or an accurate full scale reproduction thereof and using pertinent field strength measurement data where available, a full scale Exhibit of the entire pertinent area to show the following: The 0.1 mV/m groundwave contour pertinent arcs of Class 1 stations and appropriate studies to establish compliance with 47 C.F.R. Section 73.187 where operation is proposed on a U.S. Class A channel.

Exhibit No.

C. Nighttime (*for assistance, see 47 C.F.R. Section 73.182*)

- (1) **For nighttime operation, attach as an Exhibit map(s) having appropriate scales, showing the 1000 and 5 mV/m coverage contours (RSS nighttime interference-free contour if it is greater than 5 mV/m) for both existing and proposed operations. On the map(s) showing the interference-free contours CLEARLY INDICATE THE LEGAL BOUNDARIES OF THE PRINCIPAL COMMUNITY TO BE SERVED.**

Exhibit No.

- (2) Does the nighttime 5 mV/m or nighttime free contour (*whichever is higher*) encompass 80% of the principal community to be served (*50% for expanded band 1605-1705 kHz stations*)?

☐ Yes ☐ No

If No, attach as an Exhibit a justification for waiver of, or exemption pursuant to 47 C.F.R.

Exhibit No.

- (3) For nighttime operation, for stations on a frequency between 535 kHz and 1605 kHz, attach as an Exhibit allocation data including the following:

Exhibit No.

- (a) Proposed nighttime limitation to other existing or proposed stations with which objectionable interference could result, as well as those other proposals and existing stations which require study to show clearly absence of objectionable interference.
- (b) All existing or proposed nighttime limitations which enter into the nighttime RSS limitation of each of the existing or proposed facilities investigated under (3)(a) above.
- (c) All existing or proposed limitations which contribute to the RSS nighttime limitation of the proposed operation, together with those limitations which must be studied before being excluded.
- (d) A detailed interference study plotted upon an appropriate scale map if a question exists with respect to nighttime interference to other existing or proposed facilities along bearing other than on a direct line toward the facility considered. (Clipping study)
- (e) The detailed basis for each nighttime limitation calculated under (3)(a), (b), (c) and (d) above.

21. Attach as an Exhibit a map (*7.5 minute U.S. Geological Survey topographic quadrangles, if available*) of the proposed antenna location showing the following information:
- A. Proposed transmitter location accurately plotted with the latitude and longitude lines clearly marked and showing a scale in kilometers.
 - B. Heights of buildings or other structures and terrain elevations in the vicinity of the antenna, indicating the location thereof.
 - C. Transmitter location and call signs of non-broadcast radio stations (*except amateur and citizens band*), established commercial and government receiving stations in the general vicinity which may be adversely affected by the proposed operation.
 - D. Transmitter location and call letters of all AM, FM and TV broadcast stations within three (3) kilometers of the proposed antenna location.

Exhibit No.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed)	Relationship to Applicant (e.g., Consulting Engineer)
Signature	Address (include ZIP Code)
Date	Telephone No. (include Area Code)